

# CONCRETE CURING MATERIALS FIELD SECTION 1055

**1055.1 SCOPE.** To establish procedures for the inspection, sampling, and reporting of clear or transparent liquid curing compound; white pigmented curing compound; dissipating curing compound; waterproof paper; white polyethylene-burlap sheeting; and burlap and mats.

#### **1055.2 APPARATUS.**

**1055.2.1 Clear or Transparent Liquid and White Pigmented Curing Compounds.** The sample containers for materials shown in paragraphs 1055.3.1.1 and 1055.3.1.2 of this Section shall be one quart [1 liter] screw top cans which are dry and free from contamination. All sample containers, labeling, and marking materials are to be as described in General Sec 3.2.3 and 3.3 of this Manual.

#### 1055. 3 PROCEDURE.

- 1055.3.1 Clear or Transparent Liquid and White Pigmented Curing Compounds.
- **1055.3.1.1 Pre-Acceptance Lists.** Manufacturers and Brand Names of white pigmented liquid membrane curing compounds and clear or transparent liquid membrane curing compounds will be placed on the Pre-Acceptance List maintained by the State Construction and Materials Engineer in accordance with 1055.3.1.2 and the applicable specification. These lists are found in the Pre-Acceptance Lists & PAL Forms section of this Manual, and on MoDOT's web site.
- **1055. 3.1.2 Manufacturer and Brand Name Approval.** If a manufacturer desires to have material added to the Pre-Acceptance List of qualified curing compounds, a certification and guarantee must be submitted to the State Construction and Materials Engineer in accordance with the requirements of Specification Sec 1055. The certification and guarantee shall be accompanied by a one quart [1 liter] sample of curing compound. Upon approval of the curing compound, it will be placed on the applicable list. Further certification is not required.
- **1055.3.1.3 Basis of Acceptance.** Material is accepted by the PAL criteria as indicated in GS-13. The State Construction and Materials Engineer will retain the original certification and guarantee. Additional certification is not necessary if the manufacturer and brand of material is clearly identified on the container or the documentation included with bulk shipments.
- **1055. 3.1.4** All storage tanks shall provide a means for sampling and for mechanical mixing to prevent settling of material. In addition, a project storage tank shall provide a metering device so that all material for the project may be metered into the spray apparatus to determine coverage rates. Material stored for the project shall be mixed thoroughly by the means designated by the manufacturer, prior to unloading for use at the paving site. Only approved material of the same brand and manufacturer may be mixed in any transport or storage.
- **1055.3.1.5 Sampling.** Samples may be taken at the manufacturing plant, warehouse or, if necessary, at the point of delivery. The sample should be taken from a single container (or from the flow line while filling a single container) representing a specific container for each lot, batch or other unit of production in a shipment.



- **1055. 3.1.6 Manufacturing Facility.** Each curing compound manufacturer will be assigned to a district office for Facility Review, Sampling and Testing in accordance with GS-13. During the visit, samples of material available at the facility shall be obtained. Material originating too far from the assigned district's office is subject to sampling at an intermediate location or at the job site. It is the assigned district's responsibility to verify with the supplier that the location selected for sampling is acceptable to the supplier as a location from which a valid PAL source sample may be obtained.
- **1055.3.1.7 Sample.** A sample of curing compound shall consist of one quart [1 liter] of material in a screw top can. All samples shall be obtained by the manufacturer or contractor's agent in accordance with the manufacturer's sampling instructions. The inspector will observe the sampling process. The sample shall be recorded through SiteManager showing the manufacturer's name, the brand name and designation of the material, lot number, net quantity represented, and the location where the sample was obtained using the Sampled From and Sample Origin fields of SiteManager. The Other tab is also used for a Mixing Facility. The PAL ID number obtained by the supplier in accordance with Section 1055.4.1.2 should be recorded in Site Manager in the "Link To" field.

# **1055.3.2 Dissipating Curing Compound**

- **1055.3.2.1 Manufacturer and Brand Name Approval** The list of qualified dissipating curing compounds is found in the Bridge Special Provision in the contract.
- **1055.3.2.2 Basis of Acceptance** Material is accepted based upon inclusion on the qualified list. Certification is not necessary if the manufacturer and brand of material is clearly identified on the container or the documentation included with the bulk shipments.
- **1055.3.2.3** All storage tanks shall provide a means for sampling and for mechanical mixing to prevent settling of material. In addition, a project storage tank shall provide a metering device so that all material for the project may be metered into the spray apparatus to determine coverage rates. Material stored for the project shall be mixed thoroughly by the means designated by the manufacturer, prior to unloading for use at the job site. Only approved material of the same brand and manufacturer may be mixed in any transport or storage.
- **1055.3.2.4** If the shipper requests, the material will be assigned a PAL ID per FS1055.4.1.2.
- 1055.3.3 Waterproof Paper, White Polyethylene-Burlap Sheeting, and Burlap and Mats
- **1055.3.3.1 Basis of Acceptance** The Supplier shall provide evidence that the Material conforms to the specifications as defined in Section 1055 of the Standard Specifications
- **1055.3.3.2 Sampling.** Sampling will be designated by the State Construction and Materials Engineer or when specification compliance is suspect. When a shipment is sampled, the number of rolls to be sampled is one-half the square root of the number of rolls, rounded to the nearest whole number, in the shipment. A sample is to consist of a strip 18 in. [450 mm] long by the width of the roll and is to be cut at least 5 ft. [1500 mm] from the end of the roll. The samples are to be submitted to the Laboratory for testing and identified through SiteManager.



#### 1055.4 SAMPLE RECORD.

# 1055.4.1 Clear or Transparent Liquid and White Pigmented Curing Compounds

- **1055.4.1.1** Test results shall be reported by the Laboratory in accordance with Laboratory Sec 1055 and General Sec 13 of this Manual.
- **1055.4.1.2** For material shipped directly to a job site by a supplier, the supplier shall notify the State Construction and Materials Engineer prior to shipment using GS013F3. When complete and correct information on the shipment is provided to the State Construction and Materials Engineer, a PAL ID number will be assigned to the material. That number shall be attached to the material or container and stay with the material until it is consumed.
- **1055.4.1.3** Material purchased for maintenance work may be accepted solely on the basis of the PAL supplier, or manufacturer and brand being on the Pre-Acceptance List. District materials will report the receipt and acceptance of the material in SiteManager and will mark the material or containers with the sample ID number they assign.

# **1055.4.2 Dissipating Curing Compound**

- **1055.4.2.1** A sample record as described by AS3510 and including the Free Form Test will be created for any material accepted on the job on the basis of certifications, label, or invoice.
- **1055.4.2.2** If the shipper requests, the material will be assigned a PAL ID per FS1055.4.1.2.
- 1005.4.3 Waterproof Paper, White Polyethylene-Burlap Sheeting, and Burlap and Mats
- **1055.4.3.1** Test results shall be reported by the Laboratory in accordance with Laboratory Sec 1055 and General Sec 13 of this Manual.

